

REMARKS/ARGUMENTS

Applicant appreciates the thorough examination of the present application, as evidenced by the first Official Action. The first Official Action rejects all of the pending claims, namely Claims 1-20, under 35 U.S.C. § 103(a) as being unpatentable over the publication, Kyeong Jin Kim & Jiang Yue, *Joint Channel Estimation and Data Detection Algorithms for MIMO-OFDM Systems* (Nov. 2002) (hereinafter "*Kim*"), in view of U.S. Patent Application Publication No. 2004/0257978 to Shao et al. As explained below, Applicant respectfully submits that the claimed invention is patentably distinct from *Kim* and Shao, taken individually or in combination. Accordingly, Applicants respectfully traverse the rejections of the claims. Nonetheless, Applicants have amended various ones of the claims to further clarify the claimed invention. In view of the amendments to the claims, and the remarks presented herein, Applicants respectfully request reconsideration and allowance of all of the pending claims of the present application.

According to one claimed aspect of the present invention, as recited by amended independent Claim 1, an apparatus is provided for a MIMO communication system in which transmit data is communicated to and received by a receiving station upon a plurality of channels, where the apparatus facilitates detection at the receiving station of the transmit data. As recited, the apparatus includes a selector and a decoder. The selector is selectably operable to select a metric calculator value for each of at least a selected number of the plurality of channels, where the metric calculator values selected for at least two of the selected number of the plurality of channels differ from one another. And the decoder is adapted to receive each metric calculator value and the received values of data, and to separately decode the received values upon each of at least the selected number of the plurality of channels. As further recited, the decoding is performed separately for the data received upon separate ones of the selected number of the channels, at complexity levels responsive to respective metric calculator values selected by the selector.

In contrast to amended independent Claim 1, neither *Kim* nor Shao, taken individually or in combination, teach or suggest a selector selectably operable to select a metric calculator value for each of at least a selected number of the plurality of channels, where the metric calculator

values selected for at least two of the selected number of the plurality of channels differ from one another, the selected metric calculator values being received by a decoder for decoding values of the receive data. The Official Action alleges that *Kim* discloses the selector of independent Claim 1. Applicant respectfully submits, however, that even if *Kim* does disclose selecting a metric calculator value for decoding receive data, *Kim* does not teach or suggest selecting such a value for each of a selected number of a plurality of channels such that the metric calculator values selected for at least two of the respective channels differ from one another, as now recited by amended independent Claim 1. That is, *Kim* does not teach or suggest selection of different metric calculator values for different channels in a MIMO communication system, as in amended independent Claim 1.

Applicant therefore respectfully submits that amended independent Claim 1, and by dependency Claims 2-14, is patentably distinct from *Kim* and Shao, taken individually or in combination. In regards to the features of Claim 1 highlighted above, Applicant also respectfully submits that amended independent Claim 15 recites subject matter similar to that of amended independent Claim 1, including the aforementioned feature of selecting a metric calculator value for each of at least a selected number of a plurality of channels, where at least two of those values differ from one another. Applicant therefore respectfully submits that amended independent Claim 15, and by dependency Claims 16-20, is also patentably distinct from *Kim* and Shao, taken individually or in combination, for at least the reasons given above with respect to amended independent Claim 1.

For at least the foregoing reasons, Applicant respectfully submits that the rejection of Claims 1-20 as being unpatentable over *Kim* in view of Shao is overcome.

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Reply to Official Action of September 14, 2006

CONCLUSION

In view of the amendments to the claims, and the remarks presented above, Applicant respectfully submits that the present application is in condition for allowance. As such, the issuance of a Notice of Allowance is therefore respectfully requested. In order to expedite the examination of the present application, the Examiner is encouraged to contact Applicant's undersigned attorney in order to resolve any remaining issues.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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